

# IOWA energy

## BULLETIN

Department of Natural Resources  
Vol. 27, Num. 1, Winter 2001

## Natural Gas Affects Fertilizer Costs and Supplies

### Better Nitrogen Management Practices Can Help

**T**his winter's jump in natural gas prices is translating into increased fertilizer costs for farmers. Fortunately, resource management practices on the farm may provide solutions. Here is what is happening.

#### Rising Fertilizer Costs

In a year when natural gas prices have risen 400 percent, ammonia fertilizers have doubled in costs. Natural gas is the main building block for producing ammonia, which in turn is the core component of nitrogen fertilizer.

According to Chris Murray, vice president of the Agribusiness Association of Iowa, the average retail price of ammonia fertilizer is now \$370 per ton, or 22.6 cents per pound. In fall 1999, that price was \$190 per ton, or 11.6 cents per pound.

Rising natural gas costs mean fertilizer suppliers have to raise prices, and in some cases, curtail production, according to the U.S. Fertilizer Institute. That could affect fertilizer management by Iowa farmers.

#### Solutions in Agricultural Practices

Rising fertilizer prices reinforce the need for better nitrogen management in Iowa. Not only can those practices save money in fertilizer costs, they also

improve water quality through decreased fertilizer runoff and can help address regulatory concerns on agricultural operations.

Nitrogen management practices include soil and temperature testing, use of other nitrogen-rich resources like manure, and planting crops with higher nitrogen levels, such as soybeans.

The DNR and the Department of Agriculture and Land Stewardship (IDALS), along with other partners, have created several educational

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# Message from Larry Bean

## What Have We Learned?

Today's energy dilemma is a reminder of several energy crises of the past three decades. While circumstances surrounding current energy problems differ, the fact remains that *we have been here before*. The question is: "What have we learned?"

First, let us reflect on differences between yesterday and today:

- ◆ Today's energy dilemma results from events affecting *all* conventional energy resources – gasoline, oil, electricity, natural gas and propane. In the past, usually only one was directly affected, with carryover to others.
- ◆ There is no single "event" such as an oil embargo or war precipitating current circumstances.
- ◆ Nationally, there does not appear to be a plan or strategy for a clear, long-term fix.

These differences point to the complexity of today's energy concerns and may heighten our energy anxieties. Several political, economic and market-based conditions have contributed to our current problems, with no simple solutions.

That brings us to what we *should* have learned from past problems:

- ◆ Energy is inextricably linked to our economy. Every energy crisis has been followed by an economic slow down or recession.
- ◆ By managing energy demand through efficiency, we can increase productivity. As a nation, we have experienced healthy growth in our Gross National Product with little growth in energy consumption. By using less energy, we exercise control over our own energy circumstances.
- ◆ Alternatives to conventional fuel sources are actually economically profitable, especially in a state with abundant natural resources and the need for new markets for its products.
- ◆ "Supply side" answers often bring political and environmental challenges. Coupled with lengthy development

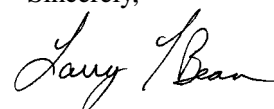


times, this assures that supply side answers do not provide near-term relief.

"What have we learned?" That the answers to economic health, energy stability and security are within our borders. Those answers are through energy efficiency and renewable energy.

The Department of Natural Resources is beginning the process of updating Iowa's Energy Plan, the major policy document outlining Iowa's energy management objectives. As we develop this plan, we will work with businesses, utilities, consumers and others to ensure a continued focus on long-term solutions to our energy situation.

Sincerely,



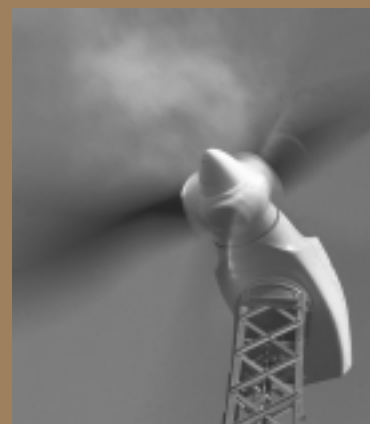
Administrator,  
Energy & Geological  
Resources Division

## New Wind Video Features Iowa Testimonials

The DNR has produced a 10-minute video, *Harnessing the Wind*, describing the benefits of wind energy development in the Midwest. Landowners and local community representatives from the Storm Lake, Clear Lake and Lake Benton, Minnesota wind farms share their perspectives on how wind energy has positively

affected their local areas. The video can be distributed to a wide range of audiences to demonstrate real-life experiences of wind energy on rural and agricultural economies.

For more information or a copy of the video, contact Jennifer Moehlmann at (515) 281-7018; or e-mail: [Jennifer.Moehlmann@dnr.state.ia.us](mailto:Jennifer.Moehlmann@dnr.state.ia.us)





## Why are Natural Gas Prices

*SkYROCKETING?*

With high winter heating prices, here are common questions and answers regarding natural gas.

**Q** **Why is the price of natural gas so high?**  
**A** The price of natural gas has quadrupled during the past nine months because of two issues: decreased supply and increased demand.

**Q** **Why isn't more natural gas available (supply)?**  
**A** The market has played a large role. When natural gas prices fell to near-record levels in 1998, exploration for new well fields dropped and workers were laid off. In the next two years, prices and demand started to rise, but exploration companies have not been geared up to meet that demand.

**Q** **Who is using all the natural gas (demand)?**  
**A** Another cause of the high prices is increased consumption. Utilities are using more natural gas as an electric generation fuel, partly because prices have remained flat

for several years, and partly because it burns cleaner than coal. Also, residences have dramatically increased natural gas use over previous years because of an early cold snap in Dec. 2000.

**Q** **How do high prices affect utility bills?**  
**A** The price of natural gas is only one component. Other charges, such as distribution and transportation, are not affected by the increase in energy costs. However, since the price of natural gas has tripled or quadrupled, heating bills may double compared to last year.

**Q** **I use propane, why is my price so high, too?**  
**A** More than two-thirds of propane is made from natural gas processing and propane prices generally mirror natural gas.

**Q** **What can the state do to help reduce the impacts of volatile price changes?**  
**A** The surest way to reduce costs is to use less energy. If the state commits to a strong policy on energy

efficiency and renewable energy, all Iowans can benefit from reduced costs. The problems and price increases associated with tight supplies can also be reduced. The state must seek solutions that are focused on long-term benefits that fully address the problem, and not seek solutions that simply address the symptoms.

For more information about energy costs and supplies, contact Ward Lenz at (515) 281-8518, e-mail: [Ward.Lenz@dnr.state.ia.us](mailto:Ward.Lenz@dnr.state.ia.us) or David Downing at (515) 281-4876, e-mail: [David.Downing@dnr.state.ia.us](mailto:David.Downing@dnr.state.ia.us)

### *Home Heating Assistance*

The Iowa Department of Human Rights offers several programs to help low-income Iowa households pay utility bills and weatherize their homes. The agency's energy crisis intervention program works to provide immediate assistance in potentially life-threatening situations. For information about these programs and how to qualify, contact, Jerry McKim at (515) 281-0859, e-mail: [jmckim@radiks.net](mailto:jmckim@radiks.net)

# New Energy Policy Task Force for Iowa

Governor Vilsack and Lt. Governor Sally Pederson have appointed a state task force to study Iowa's energy consumption, supplies and efficiency. The group will meet throughout 2001 and is charged with three major goals:

- ◆ Ensure Iowa has an adequate supply of energy in the short- and long-term.
- ◆ Provide Iowans with affordable energy in the short- and long-term.
- ◆ Ensure Iowa is maximizing energy efficiency and production of renewable energy.

The 14-member task force is

chaired by Cedar Rapids Mayor Lee Clancey and Des Moines business executive David Hurd. Other members include: Joyce Mercier, Ames; Don Wiley, Mt. Pleasant; Ken McLaughlin, Urbandale; George Van Damme, Moline; Roger Amhof, Davenport; Lana Ross, Marshalltown; Sandy Opstvedt, Story City; Lisa Davis Cook, W. Des Moines; Brenda Dryer, Spencer; Howard Shapiro, Ames; Kevin Eekhoff, Akron; and John Sellers, Corydon.

Contact Sharon Tahtinen with the DNR at (515) 281-7066; e-mail:

## Get the Latest!

Go to: [www.state.ia.us/dnr/energy/taskforce](http://www.state.ia.us/dnr/energy/taskforce) for up-to-date details on task force meetings and information.

Sharon.Tahtinen@dnr.state.ia.us for more details about the Energy Policy Task Force.

## Kids Web Page!

The Energy Information Administration, a division of the Department of Energy that provides energy statistics and data, has created a new Web site for youths. The site offers information on energy sources, how energy is used in the United States, and other useful statistics easily understood by kids.



**[www.eia.doe.gov/kids](http://www.eia.doe.gov/kids)**

## geothermal heat pumps in iowa schools

A new video and a publication developed by the DNR-Energy Bureau highlight several Iowa schools that have installed geothermal heat pump systems for heating and cooling.

The case studies demonstrate the energy cost savings, increased comfort levels, maintenance improvements and environmental benefits of geothermal technology.

The schools showcased in the materials include Webster City Middle School, Lime Springs Elementary, Oelwein Middle School, Iowa Central Community College and Clarke College.

For copies of the video and publication, please contact Jo Shea at (515) 242-5852; e-mail: [Jo.Shea@dnr.state.ia.us](mailto:Jo.Shea@dnr.state.ia.us)



# Building Energy Code Education Blueprint

## For Better Efficiency in Iowa

Iowa's building energy codes are designed to improve energy efficiency standards in new buildings. To promote those standards, the DNR is working on an exciting program that focuses on three innovative methods of education: a circuit rider program; homebuyer and key stakeholder education; and statewide demonstrations.

"Complying with energy code standards will cut a future building owner's energy bills by about 20 percent," said Craig Stark with the DNR. "That's why new homes and commercial buildings are an important target for this program."

Following are the three main areas of education for the program.



### Tightening Up Code Enforcement.

A traveling energy code expert will work with targeted communities to provide assistance in the areas of building energy code interpretation, building plan review and on-site inspection processes. This part of the project will help those communities that do not have building code officials.

### Nailing Down Homebuyer Education.

The DNR plans to educate homebuyers, builders, real estate agents, mortgage lenders, city and building officials, and appraisers by holding conferences and workshops throughout the state. Workshops will focus on the increasing value of an energy efficient home. This will be presented in terms of dollar and energy savings, along with savings to the environment.



### Cementing New Demonstration Projects.

Several Iowa community colleges are working with the DNR to help educate Iowans about residential energy efficiency. Through school building-trade projects, students will construct homes that exceed Iowa's Building Energy Code. The colleges will then host workshops and field days to share effective energy-saving building techniques with the public.

For more information about building code education in Iowa, contact Craig Stark at (515) 281-4739; e-mail: [Craig.Stark@dnr.state.ia.us](mailto:Craig.Stark@dnr.state.ia.us).

## Governors' Ethanol Coalition Accomplishments



Governor Vilsack completed his term as chair of the Governors' Ethanol Coalition this December. Among his accomplishments in 2000 were:

- ◆ Welcoming Wyoming and Washington as new members.
- ◆ Strengthening international alliances with the People's Republic of China (PRC) and Thailand.
- ◆ Establishing a Washington Representatives Office to obtain timely information on federal initiatives.
- ◆ Helping secure ethanol's role in Phase II of the Reformulated Gasoline Program and developing principles to be included in federal legislation on oxy-requirements.
- ◆ Funding a study about the ethanol industry's ability to replace MTBE.
- ◆ Becoming a member of the federal Bioenergy and Bioproducts Advisory Committee.

Nebraska Gov. Mike Johanns will chair the GEC in 2001, continuing work to expand national and global ethanol markets.

For more information, contact Sharon Tahtinen at (515) 281-7066;

# Congratulations to Environmental Award Winners

## Four Organizations Receive Energy Honors

**G**overnor Tom Vilsack honored 23 Iowa organizations, businesses and individuals with environmental excellence awards at a ceremony Dec. 14 in Des Moines. The recognition is part of a new program recognizing Iowans for their leadership and innovation in protecting Iowa's natural resources.

Four organizations received special recognition for energy efficiency and renewable energy projects:

### ◆ **Able Homebuilders,**

Sioux City, for exclusively building homes that meet U.S. EPA's Energy Star® standards. Homes built to those guidelines use 30 percent less energy in heating, cooling and water heating than standard homes. While Able Homebuilders is a small business, it is the 4<sup>th</sup> largest producer of Energy Star® homes in the state.

### ◆ **Bott's Harvest and Storage of Solar Energy,**

a 300-acre farm north of Clinton, for its work in promoting energy efficiency and renewable energy use in agriculture.

Wayne Bott has eliminated the use of synthetic fertilizers in his operation, dramatically reducing energy inputs in crop production. The farm also has turned to renewable energy whenever possible, such as wood for home heating and E85 to run the farm's tractor. Bott has shared his experiences with school groups and workshops throughout the state.

### ◆ **The Great River Medical Center,**

West Burlington, for its new facility that opened in spring of 2000, which boasts the largest geothermal heat pump system at a hospital in the country. The medical center will save 25 to 30 percent in energy costs with the new system, in addition to creating a healthier and more comfortable setting for staff and patients. The hospital also instituted various energy-saving measures such as efficient lighting and control systems.

◆ **Waverly Light & Power,** for being a leader and role model for wind energy development in Iowa. About four percent of its power comes from wind energy, one of the highest



*(Top):  
More  
than  
250  
Iowans  
helped*

*celebrate environmental excellence at a ceremony in Des Moines in December. (Below): Gov. Vilsack congratulates award winners.*

percentages in the country. In 1993, Waverly Light & Power became the first municipal utility in the Midwest to own and operate wind generation. It has continued to provide leadership for the wind industry, and in 1999 installed two 750 kilowatt turbines as part of the major wind farm near Storm Lake in northwest Iowa.

For a listing of all 23 award winners and their accomplishments, go to: [www.state.ia.us/dnr/energy/awards](http://www.state.ia.us/dnr/energy/awards). Or contact Julie Tack at (515) 281-8665; e-mail: [Julie.Tack@dnr.state.ia.us](mailto:Julie.Tack@dnr.state.ia.us)

# DNR Continues Leadership on National Energy Advisory Board

U.S. Secretary of Energy Bill Richardson has appointed Sharon Tahtinen, energy bureau chief at the Iowa DNR, to a national advisory board for Congress and the Department of Energy. Tahtinen succeeds Larry Bean, division administrator at the DNR and an eight-year member of the State Energy Advisory Board (STEAB).

Tahtinen joins a core group of seven other state energy office officials, along with heads of energy organizations and companies, on STEAB. The board provides advice and

recommendations on energy efficiency and renewable energy programs, and the deployment of new technologies.

Larry Bean, division administrator at the DNR, previously served in several leadership positions with STEAB, including chair and vice chair, since the board's inception in 1992.

For more information about STEAB, contact Sharon Tahtinen at (515) 281-7066, [Sharon.Tahtinen@dnr.state.ia.us](mailto:Sharon.Tahtinen@dnr.state.ia.us)

## "Top of Iowa" Joins Rebuild

In a joint collaboration, Winnebago and Worth counties are the newest additions to the Rebuild Iowa program. Because the two counties are located near the northern border of the state, the program will be called Rebuild Top of Iowa.

The Winnebago and Worth Counties Betterment Council (Win-Worth Betco) will spend the next year developing a joint energy efficiency program for the fourteen communities in the two counties. Win-Worth Betco works to expand the local economy by helping create and retain jobs and undertaking efforts to stimulate economic growth. Energy efficiency efforts fit well with these goals by assisting business owners in reducing their

operating costs. A steering committee representing all of the partner communities will convene to develop and promote Rebuild Top of Iowa. Initial discussions have generated much excitement and interest.

For economic and environmental benefits, Rebuild Iowa helps communities identify, implement and finance energy-efficiency improvements by integrating local, state and federal resources.

The DNR looks forward to working with WinWorth Betco to help them rebuild the top of Iowa. For more information about the program, contact Heather Silberhorn at (515) 281-5007 or e-mail: [Heather.Silberhorn@dnr.state.ia.us](mailto:Heather.Silberhorn@dnr.state.ia.us).

## Fertilizer Costs *continued from page 1*

opportunities to work with farmers on effective resource management in crop production. For information about these programs, contact Jim Gulliford with IDALS at (515) 281-6146.

Additionally, ISU Extension provides a Web site for information on nutrient management. Go to: <http://extension.agron.iastate.edu/npknowledge/>

Natural gas prices are predicted to stay high for several months, which means elevated fertilizer prices will not go away soon. For information about natural gas prices, contact Ward Lenz at (515) 281-8518; e-mail: [Ward.Lenz@dnr.state.ia.us](mailto:Ward.Lenz@dnr.state.ia.us) or David Downing at (515) 281-4876, e-mail: [David.Downing@dnr.state.ia.us](mailto:David.Downing@dnr.state.ia.us)

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# Calendar of Events

**February 18-20.** Las Vegas, NV. *Sixth Annual National Ethanol Conference: Policy & Marketing.* Sponsored/presented by the Renewable Fuels Association. For information contact Bryan & Bryan Inc. Phone: (800) 567-6411. E-mail: [marci@bbiethanol.com](mailto:marci@bbiethanol.com). Web site: [www.bbiethanol.com](http://www.bbiethanol.com)

**February 22-23.** Washington, D.C. *Governors' Ethanol Coalition Meeting.* Contact Sharon Tahtinen with the Iowa Department of Natural Resources. Phone: (515) 281-7066. E-mail: [Sharon.Tahtinen@dnr.state.ia.us](mailto:Sharon.Tahtinen@dnr.state.ia.us)

**March 6-7.** Ames, IA. *Agriculture and the Environment: Water Quality Issues for Iowa.* Contact Gerald Miller, Iowa State University College of Agriculture. Phone: (515) 294-4333. E-mail: [jpacker@iastate.edu](mailto:jpacker@iastate.edu)

**March 18-20.** Seattle, WA. *National Green Building Conference.* Sponsored/Presented by NAHB Research Center. Contact NAHB Research Center. Phone: (800) 638-8556. Fax: (301) 430-6180. Web site: [www.buildrx.com/GBC/Webdata/green.htm](http://www.buildrx.com/GBC/Webdata/green.htm)

**March 21-23.** Hilton Riverside, New Orleans, LA. *5th Annual Distributed Generation and On-Site Power Conference.* Beyond theory and policy issues, this unique event provides facts, figures and case studies of real-world applications and their results. Contact Ken Dee. Phone: (508) 427-9470. Fax: (508) 427-9477. E-mail: [gesi@mediaone.net](mailto:gesi@mediaone.net). Web site: [www.dist-gen.com](http://www.dist-gen.com)

**April 21-25.** Washington, D.C. *Forum 2001 Solar Energy: The Power to Choose.* This solar energy forum offers participants the chance to glimpse new energy technologies, products, services, designs and software. Contact Cindy Nelson. Phone: (303) 443-3130. Web site: [www.solarenergyforum.com](http://www.solarenergyforum.com)

**April 27-28.** Iowa City, IA. *Alternative Transportation Solutions for Today & Tomorrow.* Sponsored and presented by The University of Iowa, Department of Urban & Regional Planning. Contact Nancy Ostrognai. Address: 2003 Glendale Road, Iowa City, IA, 52245. Phone: (319) 338-7690. E-mail: [april27\\_01@yahoo.com](mailto:april27_01@yahoo.com)

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